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ABSTRACT

Findings from a study to determine the status of computer use by secondary principals in Kentucky are presented in this paper. Data were derived from responses of 154 principals to a statewide survey. Findings indicate that a majority of the principals were uninformed and poorly trained to use computers in the management of their schools. The result of this lack of information and training revealed a situation where computers were, at best, being used haphazardly and inefficiently. There was also a very evident lack of planning and commitment to computer use. A major obstacle was a lack of funding for computer software and hardware. Mandatory training and inservice education for existing and future principals are recommended. Eight tables present statistical results. (14 references) (LMI)

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AN ANALYSIS OF ADMINISTRATIVE COMPUTER USE BY SECONDARY PRINCIPALS IN KENTUCKY

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An Analysis of Administrative Computer Use

By Secondary Principals in Kentucky

ABSTRACT

This study was undertaken to determine the status of computer use by the secondary principals in the Commonwealth of Kentucky. A review of the literature indicated that very little research had been conducted nationwide regarding administrative computer use in the nation's schools. When the review of literature was narrowed to Kentucky, only one article was found which gave any insight into what Kentucky's secondary school principals were doing in regard to administrative computer use.

A survey was developed and sent to all secondary school principals in the state. The data were collected and presented in tabular form to analyze exactly where Kentucky secondary school principals stood in regard to computer knowledge, training, commitment, plans, and use.

The results of this survey revealed that the majority of Kentucky's secondary school principals are woefully uninformed and poorly trained to use computers in the management of their schools. The result of the lack of information and training revealed a situation where computers were, at best, being used haphazardly and inefficiently.

Procedures recommended by this study include mandatory training and inservice for the existing and future secondary principals as well as some direction and guidance being provided by the Kentucky State Department of Education regarding computer hardware and software standardization so that an effective and

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efficient information management system may be developed for both the local school district and the state as a whole. It was also recommended that there was the need for additional research regarding computer use in the administrative areas of Kentucky's schools.

INTRODUCTION

In recent years, one of the tools which has been used successfully in the effective management of any business is the computer. Since our schools are some of the largest businesses in the state, it seems only natural that the managers in this "business" should be effectively and efficiently using the computer as a management tool. This study focused on the status of the knowledge of secondary school principals regarding computers as well as the extent to which these principals use computers for administrative purposes in their schools.

In a period of time when principals are facing severe budget limitations due to the lack of funding from the state house, they are called upon to manage the resources that are received in the most efficient manner in order to provide the best education possible for the students. The researchers hupothesis that many secondary principals were woefully lacking in the skills necessary to implement and direct the effective use of computers in successful school management.

When comparing the newness of the computer technology to the age of most principals, the researchers concluded that most principals had received no formal college training in the use of computers. Also, researchers believed that principals who did not understand the value of technology would be somewhat hesitant to actively seek continuing education in the area of computers. By human nature alone, people are resistant to change and scared of exploring the unknown.

BACKGROUND AND RATIONALE

Investigation revealed that very little research was available on a nationwide basis to measure the use of computers for administrative purposes in the secondary schools. When the search for information was limited to the state of Kentucky, very little research had been done about use of computers in administrative applications in the schools of the Commonwealth. Research was being conducted or had been completed about computer use in the classroom, but this research did not extend into the management of the schools.

The only study which could be located surveyed central office management staff, but sought no information from the building principals regarding their use of the computer at the school level. This information was valid and useful but the severe time and budgetary constraints ultimately reside with the building principal. This fact alone lead to the need and desire to find out exactly what the building principals did or did not know about computers and how they were or were not using computers in their school to assist in the efficient managing of their school.

INSTRUMENT DESIGN

There were no research instruments available which measured all of the chosen factors in the areas that needed to be surveyed. Therefore, a survey questionnaire was designed

specifically for this study. The survey was designed to seek the necessary information in the most efficient way available so as to not create another demand on the already precious and limited time of a principal. The majority of the information was answered on a scantron sheet which accompanied the survey with either a yes/no answer or a selection from the multiple answers presente. This survey instrument was constructed to examine five carefully identified, separate areas of interest, involvement with, and use of computers in the administrative area of school management.

COMPUTER USE

Computers, as has been stated, have been widely used in the classroom for educational purposes but their use for administrative functions in most schools have received limited success. The extent that the schools used computers for administrative purposes depended upon the principal's level of computer literacy (Kearsley, 1988).

Microliteracy is defined as the awareness of, knowledge about, and programming experience with microcomputers. Microliteracy must precede the effective and creative use of these machines as an administrator tool, a teacher tool, and a student tool (Cutts, Matthews, Winkle, & Nichols, 1982). The degree of microliteracy an administrator possesses is largely due to the progressiveness of the individual as well as his ability to effectively change his methods of work as new technology is

developed.

While many school districts have jumped on the computer bandwagon, most of the purchases have been for instructional purposes, not administrative uses. Administrative purchases of the latest technology have lagged behind the private sector counter parts for a variety of reasons. School principals have adopted the posture that if it works, don't fix it.

According to Johnson (1985), one of the factors which is important in the use of computers in school administration is the manager's ability to accept change. Acceptance of computer technology and its use could not be discussed unless consideration were given to the acceptance or resistance to change that each individual administrator had developed. Even though most principals would admit that work in the school office was usually backlogged, they were still hesitant to propose changes.

According to Pogrow (1985), paperwork is the most mismanaged resource in education. Computers have the potential to reduce much of this paperwork by 50% to 90% in many situations. Private sector business could achieve productivity improvements of 13% to 18% within five years. These improvements would allow for a complete return on the investment of private sector computer hardware and software within 15 months.

Education's white collar administrators differ very little from their private sector counterparts. Office workers waste as much as 25% of their day which could easily be reclaimed with the use of an efficient office automation system. (Johnson, 1985).

Using the old start-sharing computer systems, most principals had experienced prolonged delays in receiving basic printouts which they needed to mange their day-to-day activities. These printouts arrived either too infrequently to be of any use or too late to take advantage of the information provided. Therefore, principals were forced to keep their own set of inefficient manual records in order to mange these daily activities (Pogrow, 1985).

According to Pogrow (1985), the ideal school administrative computer system from the perspective of the principal was one in which:

1. Data entry was easy and quick and was done as the transactions were occurring.
2. The computer checked for errors at the time of data entry and made it easy to immediately change the information.
3. Changes could be entered into the computer easily and the current status of students enrollments were updated instantly with the results easily accessible.
4. Common information was automatically transferred across applications.
5. In schools with more than 500 students it could be possible to have several linked computers or terminals so that people in different parts of the building could be working on the same system at the same time.
6. Principals and staff without technical backgrounds should be able to easily ask basic questions of the stored information and obtain immediate results
7. Principals and staff without technical backgrounds should be able to easily design report formats in minutes and required the printing of customized reports that are produced on-site within 15 minutes.

NEW TRENDS

The first trend is the rapid increase in the number of companies that produced administrative software for secondary schools and the rapid growth in the quality of the available programs. The second trend in administrative systems is towards purchasing software from a vendor instead of developing it in-house. A third trend is away from consortium and service bureaus toward purchasing and operating one's own computer, especially for student management applications. The cost of purchasing is almost always cheaper than using the services of a consortium or a service bureau.

A fourth trend is away from single computers toward distributive processing--a process where computer and data processing are spread throughout the district. A fifth trend is the computerization of more administrative applications. A sixth trend is the use of new devices such as scanners to make existing applications more efficient. The seventh trend is more direct involvement by principals and staff in working directly with computers-both in terms of helping to select them, formatting reports, and entering requests for information. The eighth trend is more powerful systems-both at the local school and district office-and greater communications within and between sites (Pogrow, 1985).

THE VISION OF THE FUTURE

Principals are trying to thrive and survive with the latest rage of the computer age (Crawford, 1982). School managers or principals can make the difference whether the school system will have a well-oiled machine or a bucket of bolts.

Educational administrator's have to look forward to the school office of the future. Office automation is a tool administrators can use to better manage their institutions, in order to use office automation successfully, administrators should educate themselves about these differences in the office now as compared to what their office of the future can become (Cantrell, 1984).

The business of education is becoming more complicated and competitive eacchday (Johnson, 1985). In order to be a successful school administrator, there are problems which have to be overcome. Some of those problems are (Crawford, 1985a):

1. Fear of computers or the problems a computer might cause.
2. Initial cost of hardware and software.
3. Lack of knowledge about what tasks can or cannot be performed by a computer.
4. Security of the methods needed to ensure limited access to data.

Principals used computers in very creative ways. A small laptop computer helped structure the elements of clinical supervision, record data items, and most importantly, quickly produce a complete transcript of classroom interaction for the

teacher prior to the post observation conference (Kuralt, 1987).

The availability of more effective computer systems means that office automation is reaching a point where paperwork could be vastly simplified. No longer is the administrator having to work til midnight to get reports completed. More time will be available to deal with student needs (Pogrow, 1985).

Some states have adopted a very progressive effort to introduce computers into the management of the schools. Georgia is going to automate the schools of the entire state by installing the Statewide Information System (SIS). This project is slated to be completed by 1994 and will radically reform the day-to-day operations of the State's 1800 elementary and secondary schools as well as 30 other technical and vocational institutions. By 1994, the schools will to be equipped with specialized applications that run on minicomputers, local-area networks and stand-alone microcomputers which will give each school access to the grades and attendance reports of more than 1.3 million students (Pang, 1989).

Experience with using a computerized management system should be an express requirement of all new administrators and counselors. Once a secondary school has good administrators who are take charge persons, properly selected computer systems could substantially improve the quality of administrative practice (Pogrow, 1985).

For a significant change like the introduction of computers into the schools to be successful, educational administrators must lead the way. They will be either the major leaders or

barriers to successful computer use (Cutts, 1982). With the new breed of school administrator, the computer will become a tool that will revolutionize student records and information processing.

Educational administrators are subjected to immense social pressures for the improvement of the education of students in their institutions. Reform of the curriculum and strengthening of teacher qualifications are currently receiving high visibility; one of the most precious resources--time--must be conserved and managed to permit other factors to operate in improving educational results. Microcomputers, when properly used, assist administrators in saving time ordinarily consumed in routine tasks, and thus provide additional time for working directly on vital leadership functions. Improvements in leadership efficiency are not likely to be significant, however, unless the computerized administrative system has been carefully built around a comprehensive and systematic plan clearly establishing goals, alternative methods, costs, benefits, responsibilities, and schedules for the implementation of the computerized system. As technical capabilities continued to increase, cost continued to decline, and as humans improved their abilities to utilize the new technological tools, a new era in administrative computer applications seemed imminent (Spuck, 1983).

FINDINGS

The following tables summarized the findings of this survey. The information was presented in tabular form to make the information easier to read and analyze.

Table I

Respondents Who Have Taught Computer Classes

Taught	N	Percentage
Yes	12	7.79%
No	142	92.21%
Totals	154	100.00%

Table II

Respondents Who Use a Computer at Home

Computer Users	N	Percentage
Yes	21	13.64%
No	133	86.36%
Totals	154	100.00%

Table III

Respondents Having Any Special Computer Training

Training	N	Percentage
Yes	32	20.78%
No	122	79.22%
Totals	154	100.00%

Table IV

Administrative Tasks Related to Students

	Yes		No	
Task	N	Percent	N	Percent
Records	91	59.10%	63	40.90%
Scheduling	97	62.99%	57	37.01%
Attendance	79	51.30%	75	48.70%
Grade Reporting	83	53.90%	71	46.10%
Discipline	62	40.26%	92	59.74%
Career Planning & Placement	41	26.62%	113	73.38%
National Standardized Testing	58	37.66%	96	62.34%
Kentucky Essential Skills Testing	111	72.08%	43	27.92%
Other Student Testing	13	8.44%	141	91.56%

Total N = 154

Table V

Administrative Tasks Related to Personnel

	Yes		No	
Task	N	Percent	N	Percent
Staff Records	31	20.12%	123	79.88%
Evaluation Reports	27	17.53%	127	82.47%
Recruitment	5	3.24%	149	96.76%
Selection	16	10.38%	138	89.62%
Placement or Assignment	42	27.27%	112	72.73%[1]
Leave (Sick or Other)	39	25.32%	115	74.68%
Substitute and Part-time Employees	12	7.79%	142	92.21%
Observation Tool	3	1.94%	151	98.06%
Other	0	0.00%	0	0.00%

Total N = 154

Table VIII

Respondent's Commitment to Administrative Computer Use

Type	N	Percentage
Very Committed	24	15.58%
Somewhat Committed	87	56.49%
Not Committed	43	27.92%
Totals	154	100.00%

CONCLUSIONS

Based upon the research, it was found that a majority of secondary principals in the Commonwealth of Kentucky were not using computers to assist them in managing the school in which they work. These principals received little or no formal training in the use of computers. Beyond this, the school system in which they worked did not offer any type of training in the use of computers to help them manage their schools. In a majority of the school systems, there was no centralized computer coordinator to assist the administrators in learning how to use computers. There was also very evident lack of planning and commitment to computer use in the administrative areas of Kentucky's schools. Most disturbing was the lack of commitment to computer use in the

area of administrative school management.

It was extremely important to note that a majority of secondary school principals viewed the lack of funding to purchase and use computer software and hardware as a major obstacle when they began to consider the implementation of computers into the administrative areas.

It should also be noted that a seriously lack of understanding as to how a computer could be used as a personal productive tool for the administrator was present.

Basically, the data collected lead to several conclusions. Kentucky's school administrators were in bad need of training, preparation, and knowledge regarding the effective use of the computer as a management tool. There was a need to assist the principals in the recognition of the importance of the computer in good management as a personal productivity tool. The secondary school principal needed to follow his private sector management counterpart in learning the many uses of a computer. The obvious lack of knowledge and commitment to learning about computers was a startling fact which was evidenced by the data collected.

It was apparent that a lack of funding for computer software and hardware was a major obstacle that principals had to face and overcome before computers could become a part of the bag of tools used by the school administrator to successfully perform his/her day to day duties.

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